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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,829	11/20/2001	Johannes Heinrich	31830-176291 RK	8831

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EXAMINER

JOHNSON, VICKY A

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,829

Applicant(s)

HEINRICH ET AL.

Examiner

Vicky A. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because in figures 5 and 7 the reference character "3" is not pointing to a shaft. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: on page 16, line 17 "cam curves 31, 33" should be --cam sleeves 31, 33--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 20-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 20-22, 25, 26, 35 and 37 it is unclear which of "the cone pulleys" is being claimed. It is suggested the terms "input side" and "output side" be used in conjunction with the cone pulleys to distinguish which particular set of pulleys are being claimed.

In claims 20, 26, 29, 35, 36 and 37 it is unclear which shaft is being claimed when it is referred to as "the shaft".

In claims 24, 25 and 27-30 it is unclear if "the holding ring" and "the guide ring" are the same as "the rings" of claim 20.

Claims 31 and 32 recite the limitation "the holding ring" in lines 3-5. There is insufficient antecedent basis for this limitation in the claim.

In claims 23 it is unclear how the roll bodies can engage the recesses, the pinions engage the recesses.

In claims 24, 25, 28 it is unclear if the bores, the slots and the groove are the same as "the recesses" of claim 23.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 20–24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dhont (EP 0097986) in view of Berens et al (US 4,016,771).

Dhont discloses an infinitely variable cone pulley transmission (see Fig 6) and the generating of axial contact pressure forces of the cone pulleys upon a traction means (69), rotating between the cone pulleys, via tensioning means (65,70) arranged on the transmission shafts (23, 24), which exert forces in axial direction upon respectively one cone pulley that can be displaced axially along the respective transmission shaft, wherein hydraulic tensioning means (65) are provided on a first transmission side for adjusting and maintaining the transmission ratio and a spring supported tensioning means (70) that is braced against a support (unnumbered, see Fig 6 the member to the left of 81, fixed relative to the shaft (page 11 line 33 – page 12 line 3), is provided on the second transmission side, wherein an axially fixed cone pulley (67) and an axially movable cone pulley (68) with an extended hub (see Fig 6) are jointly arranged on the second transmission side, the cone pulleys are rotationally connected and jointly rotate on their transmission shaft and are coupled to said

transmission shaft via a contact pressure mechanism (70) that depends on the rotational moment or the rotational moment and the transmission ratio, the contact pressure mechanism consists of a cam sleeve (72) that is fixedly connected to the shaft (81 is connected to the fixed pulley 67), a cam sleeve (74) formed by the free end of the extended hub (the connection of the 81 and its connection being part of the extended hub).

Dhont does not disclose roll bodies for transmitting the force, wherein said roll bodies are inserted between opposite arranged cam curves and rotate around the roll body axes extending in radial direction, relative to the transmission shaft, said roll bodies are guided by rings, are held at a mutual distance to each other in the axial center region between the cam sleeves with the aid of a spring that is arranged coaxial on the extended hub.

Berens et al disclose roll bodies (11) for transmitting the force, wherein said roll bodies are inserted between opposite arranged cam curves (9,10) and rotate around the roll body axes extending in radial direction relative to the transmission shaft (see Fig 1), said roll bodies are guided by rings (12 and part of the cylindrical sleeve of the sheave 3), are held at a mutual distance to each other in the axial center region between the cam sleeves with the aid of a spring (13) that is arranged coaxial on the extended hub (see Fig 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the roll bodies and guide rings of Berens et al in the .

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transmission of Dhont in order to prevent damage to the rolling surfaces (col. 2 lines 16-44).

Re claim 21, Dhont shows the cone pulleys are arranged on a hollow shaft (see 6), which is positioned on the transmission shaft (24), such that it can rotate but cannot be displaced in the axial direction (page 11 lines 9-12), that the axially fixed cone pulley is rigidly connected to the hollow shaft (the shaft part of 67), that the axially moveable cone pulley (68) is connected to the hollow shaft so as to rotate along (page 1 lines 9-23) and that the cam sleeve (72) that is fixedly connected to the shaft is arranged next to the hollow shaft on the transmission shaft such that it can rotate along and cannot be displaced (page 11 lines 24-26), at least not in an axial direction away from the opposite arranged cam sleeve.

Re claim 22, Dhont shows the axially fixed cone pulley (67) forms one piece with the hollow shaft (see Fig 6).

Re claim 23, Berens et al show the roll bodies (11) engage in corresponding recesses on the rings with the aid of pinions that are coaxial to their rotational axes and project in radial direction relative to the transmission shaft from the roll bodies (see Fig 1).

Re claim 24, Berens et al show a holding ring (12) is arranged in radial direction coaxial to the transmission shaft, either inside or outside of the roll bodies, and that the pinions on the roll bodies are positioned so as to rotate inside holding ring bores, extending in radial direction relative to the transmission shaft (see Fig 1).

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10. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dhont (EP 0097986) in view of Berens et al (US 4,016,771) as applied to claims 20-24 above, and further in view of Höhn et al (DE 3403704).

Dhont shows the hydraulic tensioning means comprises the associated axially displaceable cone pulley (64) as bottom for a pressure cylinder connected to the cone pulley (see Fig 6), which pressure cylinder forms together with a piston that is fixed relative to the shaft and a pressure chamber (see Fig 6).

Dhont does not disclose a pressure chamber which a pump supplies a pressure medium, taken from a pressure medium supply via a pressure medium supply line for maintaining and adjusting a transmission ratio in a manner determined by a control valve, characterized in that a reversing valve is arranged inside the pressure medium supply line and that via the reversing valve, the pressure chamber can be connected to the pressure medium supply or the intake side of a pressure medium pump.

Höhn et al disclose a pressure chamber (58) which a pump supplies a pressure medium (see Fig 1), taken from a pressure medium supply (28) via a pressure medium supply line for maintaining and adjusting a transmission ratio in a manner determined by a control valve (22), characterized in that a reversing valve (44) is arranged inside the pressure medium supply line (42a, 42b) and that via the reversing valve, the pressure chamber can be connected to the pressure medium supply (28) or the intake side of a pressure medium pump.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the hydraulic circuit as taught by Höhn et al in the

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transmission of Dhont in order to maintain a predetermined base pressure in the hydraulic control (abstract).

Re claim 38, Höhn et al show the reversing valve can be activated by the control for the control valve (abstract).

Allowable Subject Matter

11. Claims 25-36 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (703) 305-3013. The examiner can normally be reached on Monday-Thursday (7:00a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

vaj *Vaj* 03/10/03
March 10, 2003


Thomas R. Hannon
Primary Examiner